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Public Service reform through e-Government: a case study of 'e-Tax' in Japan

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Keywords

Public, Service, reform, through, Government, case, study, Tax, Japan

Disciplines

Physical Sciences and Mathematics

Publication Details

Chatfield, A. Takeoka. (2009). Public Service reform through e-Government: a case study of "e-Tax" in Japan. *Electronic Journal of e-Government*, 7 (2), 135-146.

Public Service Reform through e-Government: a Case Study of 'e-Tax' in Japan

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Abstract: There is a growing interest in the debate over whether or not e-government has a transformational impact on government performance, governance, and public service, as we addressed this very issue at the 2007 ECEG. However, e-government research results on the transformational impact are mixed. This may be an apt reflection of either the early stages of e-government development or the newness of e-government research field or both. Our research goal as scholars of e-government must be to penetrate appearances to ascertain whatever lessons and meanings might lie beneath. This paper is an initial attempt toward achieving this goal. The main objective of this paper is to examine the relationship between public service reform through e-government and actual government performance. We achieve this objective through a multi-method approach, including a case study of Japan's National Tax Agency (NTA)'s sophisticated e-government initiative: an integrated "e-Tax" system networking the NTA with local tax offices throughout Japan. The "E-Tax" provides a citizen-centric, online income and other tax returns filing and payment services for individuals and corporations. A preliminary case analysis provides evidence in support of the transformational impact of e-Tax on NTA performance. This paper makes an important contribution to the growing e-government research literature on the transformational impact of e-government particularly on service process reform.

Keywords: transformational impact of e-government, public service reform, electronic tax filing, case study, National Tax Agency, Japan

1. Introduction

e-Government refers to the use of information and communication technologies, particularly the Internet, to deliver government information and services (ANOA 2006). National governments worldwide are engaged in public service reform initiatives and e-government initiatives. The two initiatives may run in parallel in some governments with very little overlap or coordination. Alternatively, in others e-government initiatives are means for implementing public service reform policy goals. Japan's "*E-Government Establishment Plan*" (CIO Council 2003) is an example. There is a growing interest in the debate on whether or not e-government has the transformational impact on government performance, governance, and public services, as we addressed this very issue at the 2007 ECEG. Here the term "transformational" is used to convey radical change in strategic direction, in contrast to incremental change in day-to-day operational routines. The radical and strategic nature of organizational transformation has been referred to as "the third kind of game change" (Flamholtz and Randle 1998) in change management and "the second-order organizational transformation" (Scholl 2005) in e-government. According to Flamholtz et al., transformational change requires a complete change in strategic direction. The organization fundamentally changes the basic concept of its core business. Similarly, Scholl (2005) defines the second-order organizational transformation as "a discontinuous, radical organizational change involving a paradigmatic shift" by drawing on the work of Levy and Merry (1986). The new concepts of "transformational government" (UK HM Government 2007; Irani et al. 2007) may signal the emergence of this discontinuous, radical transformational change intent of public administrations to move, from bureaucracies and the traditional government-centric public service "silos" that are often ineffective and inefficient in creating new value (Bannister 2001), towards citizen-centric public services and policy outcomes through the transformational impact of e-government to meet the demands of continually changing, globalized society.

While the radical and strategic kind of organizational transformation holds the promise of the highest-level return (Flamholtz and Randle 1998), achieving organizational transformation of bureaucracy through e-government is highly risky and complex because of internal stakeholder buy-in and commitment required from policy makers, management, and public servants. In the case of tax administration reform through e-government, the level of risk and complexity further increases because of the imperative of gaining external stakeholder trust in government and ensuring voluntary adoption of the Internet channel and effective use of new software tools before the public administration can achieve the potential transformational impact of e-government and realize the desired policy outcomes. Given the high-level risk and complexity involved in realizing public service

reform through e-government, therefore, it is not surprising to find that e-government research results on the transformational impact are mixed (Scholl 2005). However, this may be an apt reflection of either the early stages of e-government development or the newness of e-government research field or both. Our research goal as scholars of e-government must be to penetrate appearances to ascertain whatever lessons and meanings might lie beneath. This paper is an initial attempt towards achieving this goal. The main objective of this paper is to examine the relationship between public service reform through e-government and actual government performance. Our research strategy for achieving this objective includes a case study of Japan's National Tax Agency (NTA) and its core e-government initiative: "e-Tax" – an online income tax returns filing and payment services for individuals and corporations. Like other nations' e-tax filing systems, Japan's "e-Tax" is an add-on self-service option through the Internet channel. This new channel choice is made available to citizens and corporations, not as a substitute, but as a complement to extant ways of fulfilling national tax law compliance. By offering this channel choice, NTA intended to transform the bureaucratic tax public administration into a modern, citizen-centric "service" organization, regain citizen trust, and achieve the policy outcomes – better tax law compliance in the globalized industrial nation of ageing population (NTA 2007). Since "e-Tax" adoption is voluntary and also requires considerable switching costs (e.g. obtaining digital signature for taxpayer authentication and learning new software tools), citizen adoption of "e-Tax" can be viewed as evidence that citizens perceive "e-Tax" channel choice as superior, with respect to extracting value from NTA, to the traditional (e.g. paper-based tax filing and face-to-face and phone consultation) tax services. A preliminary case analysis provides evidence in support of the transformational impact of "e-Tax" on NTA performance and public services. This paper makes an important contribution to the growing e-government research literature on the transformational impact of e-government particularly on service process reform.

The remainder of this paper is organized as follows. Section 2 presents a literature review of e-government research on the transformational impact of e-government. Section 3 describes the case study background on Japan's National Tax Agency (NTA) and tax administration reforms. Section 4 discusses the agency's tax service reform through "e-Tax". Section 5 discusses transformational impacts of "e-Tax" on agency performance and public service delivery. Section 6 presents the conclusion on the transformational impact of e-government and future research directions.

2. Transformational impact of e-government

While the concepts of public administration reform are not new at all in government research and practice (e.g., Light 2006), the new ideas such as public service quality and government responsiveness to the public (Teicher et al. 2002) and IT-enabled public service reform are relatively new and emerging in government policy and multi-disciplinary research.

2.1 Mixed research findings on the transformational impact of e-government

Against the explicit transformational intent articulated in the US "E-Government Strategy" (Executive office of the President of the United States 2002) and the UK "Transformational Government enabled by Technology" (Cabinet Office 2005; UK HM Government 2007), extant research findings on the transformational impact of e-government are mixed. Scholl (2005, p. 1) concludes: "While one group of e-Gov researchers emphasizes the transformational impact of e-Gov on the business of government, others have squarely questioned this assertion."

On the one hand, positive research findings support the transformational impact of e-government. Sophisticated e-government services such as IRS's eFiling and Ireland's Revenue Online Service initiatives produced the positive impacts on improving public service quality (Bird and Oldman 2000; O'Donnell et al. 2003) and restoring public trust (Moon 2003). Similarly, advanced functionalities of e-government such as transaction, transparency, and interactivity directly impacted perceived public satisfaction with e-government service and indirectly impacted public trust (Welch et al. 2004). In his review of the literature on the transformational impact of e-government, Scholl (2005, p. 1) concluded: "e-Gov, at least in the short term, has the capacity to transform the business of government in mode rather than in nature." On the other hand, research results failed to find evidence for the transformational impact of e-government. West (2004, p. 24) concludes that "evidence from this research is consistent with incremental rather than transformational change". Based on the two local e-government surveys in the U.S., Norris and Moon (2005) also reported very few transformational impacts at the local government level. Despite their seemingly negative conclusions, however, the authors suggest future conditions under which the transformational impact of e-government may be

plausible. For example, West concludes (p. 24): "Few government Web sites have progressed to the fully integrated and executable online service delivery or interactive democracy stages. ... For government agencies to realize the transformational power of the Internet, officials need to rely on models that emphasize integration, functionality and democracy enhancement." Similarly, Norris and Moon (2005, p. 64) conclude that "the movement toward integrated and transactional e-government is progressing much more slowly" in comparison to the progress made by local governments so far in providing less sophisticated and largely informational e-government. Their conclusion on the slow progress of sophisticated e-government still remains valid in light of 2007 global e-government survey findings. In the survey of 1,687 government websites in 198 different nations, only 28 percent of government websites provide transactional capabilities, which did not change much from the previous year (West 2007).

One plausible reason for the mixed findings is the general lack of sophisticated e-government developments for new and different ways to provide improved public services that make a difference to the public and hence create value from e-government investments. This suggests the urgent need for e-government research on exploring transformational impact from sophisticated e-government development initiatives that offer advanced capabilities such as transaction, transparency, and interactivity.

2.2 Research questions

According to West (2004), public buy-in of the transformational impact of e-government requires evidence of:

- Major improvements in government performance
- Information technology (IT) use in government is responsible for the improvement.

This research aims to address the transformational impact of e-government by exploring links between public service reform through e-government and actual government performance. In this research paper we raise two questions:

- 1. What are major transformational improvements in government performance?
- 2. To what extent is e-government responsible for the transformational change?

To address these questions we adopt a multi-method approach which is necessary to understand the complexity of the social and political processes (Scholl 2005): a case study of Japan's tax administration service reform through e-government, a web site analysis, and a content analysis of government policy statements and central Government meeting minutes (in Japanese) which were collected through Japan's e-government portal: "www.e-gov.go.jp".

3. National Tax Agency and tax administration reforms

The central Government's push for e-government has seen many e-government initiatives being launched by the Japanese Government Ministries and Agencies. This section describes Japan's National Tax Agency (NTA) and its historical tax service reforms. The next section 4 discusses the NTA's e-government initiative, "e-Tax".

3.1 Background

As part of the post-war structural reform of government, NTA was founded in 1949 as the Ministry of Finance's operating agency for centralized management and control of national tax administration. A 2003 NTA planning document outlines standards and guidelines on NTA's tax administrative tasks and performance evaluation (NTA 2004). According to this document, the NTA needs to create "favourable environments for taxpayers" that promote effective and efficient tax administration. The NTA performance depends on creating the favourable tax environments which are defined by the following organizational capabilities to:

- Provide taxpayers with accurate information of the laws and administrative procedures related to filing self-assessment tax returns and paying taxes;
- Answer promptly and consistently taxpayers' inquiries;
- Obtain broad cooperation and participation of the public in fulfilling their tax compliance.

The organizational structure of NTA consisted of the head office, 11 regional taxation bureaus and 497 local tax offices at the inception. Over the years, this structure remains unchanged, except a slight increase of local tax offices to 518 (NTA 2007). However, the number of the NTA employees has been sharply reduced from Fiscal 2004 to Fiscal 2006, which is due to the central Government's 2001 reform policy including government downsizing. Figure 1 shows this downsizing trend of NTA.

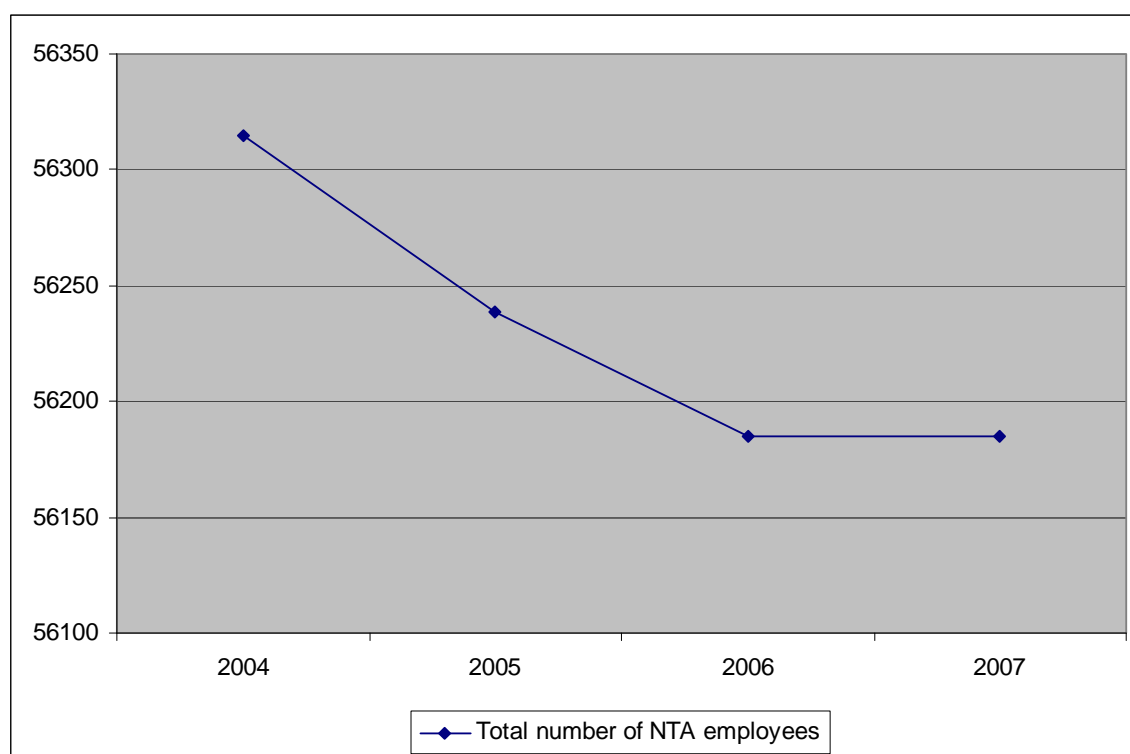


Figure 1: Recent trend for NTA downsizing

3.2 Historical tax service reforms

At the inception, the NTA was required to introduce a radical tax administration reform to control the rapid inflation in the after-war Japan. The adoption of a US style self-assessment system, however, created an unexpected level of confusion among small and medium-sized enterprises which lacked sufficient knowledge of accounting and taxation. In consequence, about 70 per cent of taxpayers were subjected to correction or determination for non-filing or under-filing of income tax returns (Usui 2002). The bureaucratic and inefficient responses in handling the public confusion and administrative problems further contributed to taxpayers' distrust of the tax administration agency.

The NTA decided to introduce a new "tax consultation" method, which remains in use until recently (NTA 2007). This new method was intended to provide a platform for the consultation services necessary for taxpayers to file their returns voluntarily and correctly. The typical procedures based on the new method involve the following steps: 1) Tax officers request business income earners to visit a NTA office at an appointed date and time; 2) Tax officers answer taxpayers' questions about accounting procedure or tax laws. The latter visit the office with their accounting books and records to calculate their income; 3) If taxpayers ask, tax officers instruct them on how to fill in the return form or fill in the form on their behalf (Usui 2002). The idea behind this new tax consultation method was to eliminate government influence and taxpayer dependence on the NTA by encouraging taxpayer self-service in filing income tax returns. While the new tax consultation method was intended to increase self-service, it required taxpayers to visit the NTA local offices for consultation, often multiple visits, to file their national income tax returns. Because the new tax consultation method is time-consuming and taxpayers are required to wait in a long queue, taxpayer compliance costs are considerable, particularly for business owners of small and medium size enterprises which dominate the Japanese private sector economy. In consequence, as the number of income tax returns filings and other tax forms filings increased with the economic growth over the years, the NTA tax administration efficiency was increasingly challenged.

3.3 Increasing tax administration workload

In Fiscal 2007, the NTA collected ¥53.5 trillion in national tax revenue, which represents 64.5% of Japan's ¥82.9 trillion national revenue, (NTA 2007). This contrasts to ¥43.8 trillion in national tax revenue in Fiscal 2002 (NTA 2002). With the increased national tax revenue collection, the number of income tax returns filed by individuals and corporations increased. The total number of returns continues to rise from 11 million in 1978, nearly 18 million at the beginning of the 1990s, 20.4 million in 2000, and 24.49 million in 2007 (Usui 2002; Okada 2002; NTA 2007). This increasing tax administration workload problem was made worse with the recent NTA downsizing trend discussed earlier in Section 3.1.

The problem of the increasing tax administration workload was particularly serious in suburban tax offices adjacent to large cities. With the growing number of taxpayers visiting local tax offices for consultation, taxpayers frequently had to wait for hours to receive the services. With the increasing number of income tax returns filed in the first half of the 1990s, there was considerable concern among senior administrators about "an explosion of taxpayer complaints concerning this congestion". In consequence, addressing this central problem became the most critical issue of income tax administration (Usui 2002, p. 18). This concern led to a comprehensive review of administrative reform to tax consultation. The initial solution was to replace the individual "face-to-face" method with the "group consultation" method for tax consultation. Most recently, however, the concern led to e-government development: an integrated online self-service tax return filings and payment through the Internet channel. Hence, "e-Tax" was launched in 2004 nationwide.

4. e-Tax

The NTA's transactional website through "e-Tax" is a prime example of the Japanese public service reform efforts through e-government. Its software development outsourcing cost government ¥50 billion (NTA 2007). "E-Tax" is intended to radically improve tax administration efficiency in both back office tax record management and front-line tax consultation and to significantly reduce the public's tax compliance costs: the dual benefits for both internal (NTA tax administrators and front-line tax consultants) and external stakeholders (taxpayers). Jiro Makino, the NTA Commissioner, presents the case for e-government-enabled tax service reform in his 2007 report to taxpayers (NTA 2007, p. 29): "In order to provide more convenient services for the public and manage administrative operations in more simplified, efficient, advanced and transparent manners by utilizing IT in the civil services and reviewing administrative operations and systems, the "E-Government Establishment Plan" was determined in July 2003. Since then, the Japanese Government as a whole has been working on IT-based civil service reforms to provide better and more convenient civil services."

4.1 NTA's transactional website

The central Government operates the whole-of-government web portal (www.e-gov.go.jp) as the primary, convenient, one-stop entry point to government online information and services to the public. According to the UN 2008 survey of global national e-governments, Japan ranks 11th in global "e-readiness" among a total of 192 member nations (United Nations 2008). This recent global rank signals a marked improvement in the Japanese Government's IT use in providing sophisticated e-government services across many Ministries and Agencies. Taxpayers can access the NTA home page (Figure 2) from the central Government web portal with one mouse click (or one page down from the portal). On the left-hand side of Figure 2 there is a column of main menus including "e-Tax" (the last menu choice and highlighted in a different shade). In the middle of the home page, there is a list of several tax news and topics. On the right-hand side, the public can access the NTA performance audit reports, annual reports, public comments, agency information and statistics as well as national tax laws and new e-government laws.



国稅庁 NATIONAL TAX AGENCY

サイト内検索 検索 | 検索の仕方 | 文字拡大・読み上げ

ホームページの使い方 | サイトマップ | ご意見・ご要望 | メールマガジン

ホーム | 税について調べる | 申告・納税手続 | 活動報告・発表・統計 | 国稅庁概要・採用 | 調達・その他の情報

▶ 新着情報

▶ 訪問者別に調べる

▶ 税目別に調べる

所得税 法人税
源泉所得税 消費税
譲渡所得 印紙税
相続税 酒税
贈与税

▶ パンフレット・手引き

▶ 税法・通達等・質疑応答事例

▶ 申請・届出様式

▶ タックスアンサー

▶ 確定申告書等作成コーナー

▶ 国稅電子申告・納税システム (e-Tax)

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高松 | 福岡 | 熊本 | 沖縄

確定申告特集

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トピックス

▶ 社会保険庁が発行した「公的年金等の源泉徴収票」の誤りへの対応について NEW

▶ 平成20年1月21日から国稅のコンビニ納付を開始します

▶ 申告書の税務署への送付について

▶ 平成19年(2007年)新潟県中越沖地震により被害を受けた皆様へ

▶ 不正ガランに関する情報をお寄せください「不正ガラン110番」

▶ 税務職員を装った不審な電話にご注意ください

▶ 法人の減価償却制度の改正に関するQ&A(PDF/391KB)

▶ 平成19年から所得税と住民税が変わりました(税源移譲)

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申告や納税など税に関する手続・制度の概要・様式を掲載

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税について考えよう

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月間アクセスTOP10

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▶ 採用案内

▶ 所管公益法人

活動報告・発表・統計

▶ 審議会・研究会等

▶ 国稅庁の実績の評價

▶ 国稅庁レポート

▶ パブリックコメント

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▶ 統計情報

申告・納税手続

▶ 税務手続の案内

▶ 事前照会に対する文書回答

▶ 所管法令(e-Gov)

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▶ 国際業務関係情報

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Figure 2: NTA home page (in Japanese)

The public can access the “e-Tax” page (Figure 3) which is one page down from the NTA home page (Figure 2). Through “e-Tax” the public can access online transactional functions: registering “e-Tax” use, preparing individual and corporate income tax returns online, obtaining map-based property valuation online through a geographical information system (GIS), and paying all types of taxes online through direct links to taxpayers’ online banks. The NTA’s transactional website with advanced “e-Tax” functions is meant that taxpayers can fulfil their national tax obligations anywhere and anytime at their convenience without visiting and waiting in a long queue at a NTA local office. For those who do not have their own computer, the NTA provides PCs and touch screens at local tax offices.



さらに便利に使いやすく
国稅電子申告・納税システム

e-Tax

システム概要 | 事前準備 | 初期登録 | 手続の流れ | e-Taxソフト | 参考事項 | お問い合わせ | ご意見・ご要望

現在の位置: トップページ

e-Taxをはじめる前に

e-Taxとは?

推奨環境

電子証明書の取得

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▶ 電子納税が利用可能な金融機関

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国稅電子申告・納税システム

▶ 詳しくはこちら

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準備 ▶ 登録 ▶ 作成・送信 ▶ 確認

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ご理解のほどよろしくお願いいたします。

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お知らせ

新着情報

お知らせ一覧

▶ 「国稅電子申告・納税システム(e-Tax)の利用に関するアンケート」を実施しています NEW

▶ 「利用者識別番号等が記載された通知書の発送スケジュール」についてを更新しました NEW

▶ 「e-Taxソフト(仕様書)及び「源泉徴収票等のオンライン送信に係る仕様書」を更新しました NEW

▶ 「印紙税申告に係る電子申告参考資料について」を更新しました NEW

Figure 3: “e-Tax” page (in Japanese)

4.2 Online “e-Tax” returns filing and payment workflow

National tax data contain sensitive personal and financial information. Any security breach will have negative impacts on the credibility of tax administration and public information privacy rights. So the NTA requires taxpayers to comply the NTA security standards, including the purchase of a taxpayer authentication system (cost about ¥3,000) and digital signature (see “prior procedures” in Figure 4 below). In consequence, taxpayers without sufficient computer literacy and Internet efficacy find it intimidating to start using “e-Tax”. Moreover, there is a not-so-trivial learning curve in getting used to the use of “e-Tax” software. Hence, switching costs – costs incurred a taxpayer from switching from the traditional ways of fulfilling tax laws compliance to this new Internet-enabled tax filing and payment method – are considerably high for many taxpayers. In fact, despite the central Government push for “e-Tax” adoption and diffusion, only 15 of the 144 Diet members (policy makers) used “e-Tax” in their personal income tax returns filing and payment (The Japan Times 2007). Figure 5 shows the online e-Tax returns filing workflow among the “e-Tax” user, NTA employees, and Financial Institutions over the Internet.

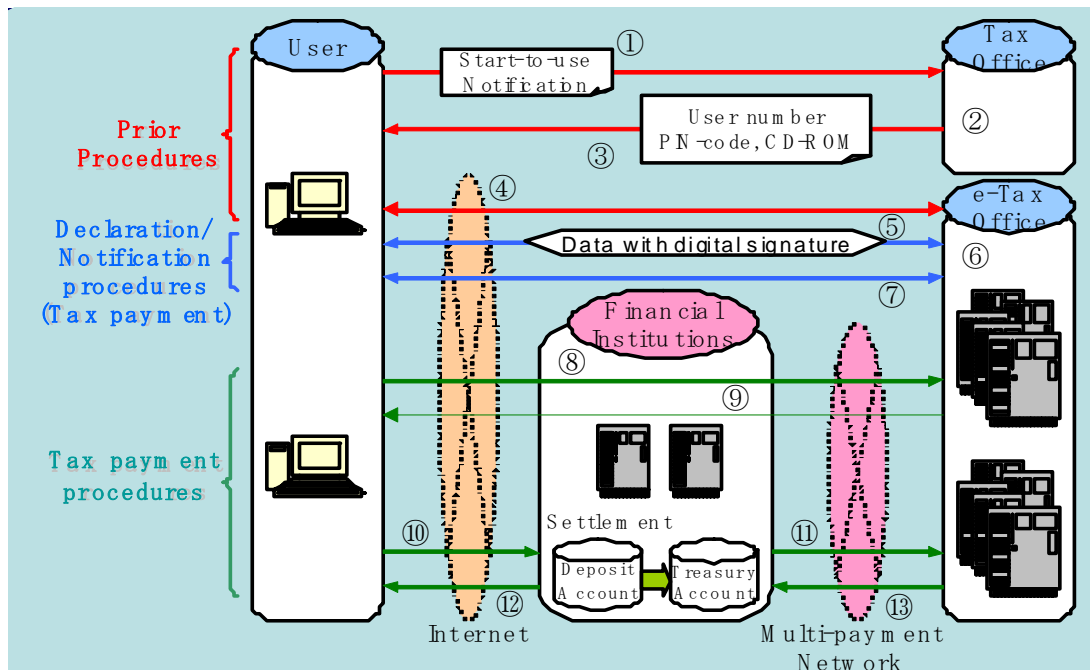


Figure 4: e-Tax workflow adopted from NTA (2005)

The data transferred through “e-Tax” with digital signature are processed and managed by the NTA Comprehensive Information Management System (known as KSK system). This internal tax record processing system was introduced in some local offices in 1995, evolved into a vertically and horizontally integrated enterprise record management system, and was fully operational nationwide in 2001. The KSK system links all Regional Taxation Bureaus, Okinawa Regional Taxation Office and the NTA head office. It enables authorized front-line tax consultants to view taxpayers’ income tax returns and tax payment records online during tax consultation sessions as well as for the purpose of tax audit.

5. Transformational impacts of “e-Tax”

As discussed earlier in Section 2.2, the case for the transformational impact of e-government requires evidence of:

- Major improvements in government performance
- IT use in government is responsible for the improvement (West, 2004).

So in this section, we examine the transformational impact of “e-Tax” by evaluating case study data to determine whether or not such evidence exists.

5.1 Major improvements in NTA performance

As discussed earlier in this paper, the NTA's performance depends on "creating the favourable tax environments". The NTA tried to achieve this by launching "e-Tax". With the "e-Tax" system use, the NTA aimed to simplify extant tax administration processes and make national tax laws compliance more convenient. The successful implementation of "e-Tax" produced two major benefits: (1) reduced tax administration costs and (2) reduced taxpayer compliance costs. Firstly, the launch of "e-Tax" enabled taxpayers to submit income tax returns and tax payment through the Internet as digital data, which are then transferred, processed and managed by the KSK knowledge management system. The technological integration between the web-based "e-Tax" system and the centralized internal information system enabled to network the NTA tax officers, front-line tax consultants, and taxpayers to share information through digital records rather than paper-based income and other tax forms. In consequence, the NTA could get things done more efficiently with less time. It is noteworthy that the increased pace of the NTA performance was realized in the challenging operational environment. The NTA could keep up with the increased workload with the radically downsized staff. The NTA workload increased over the years. The total number of tax returns filed rapidly increased from 7.3 million income tax returns in 1975 to 23.5 million in 2007. On the other hand, the total number of local tax office employees was downsized from 44,171 in 2004 to 43,870 in 2007. Secondly, the NTA's operational efficiency gains benefitted taxpayers: they received quick response to their tax questions and more consistent tax consultation services across all the local tax offices distributed throughout Japan. The "e-Tax" channel option enabled to reduce the local tax office congestion problem and address the NTA's central concern about the taxpayer dissatisfaction with the NTA tax services. This is a significant organizational transformation, given the public distrust of the NTA (Section 3.2) with respect to the bureaucracy and inefficiency in responding and engaging citizens (Section 3.3).

5.2 "e-Tax" is responsible for the improvements

Senior managers considered it difficult to achieve the major improvements in performance; namely efficiency gains in tax administration and a paradigmatic shift to the new citizen-centric tax services, without the launch of advanced transactional "e-Tax", particularly under the adverse operational environment they faced. Besides the favourable perception of the NTA senior managers, internal stakeholders of the "e-Tax" initiative, is there other positive or negative evidence for us to conclude that "e-Tax" is or is not responsible for the major improvements in the NTA performance?

The NTA Commissioner, Jiro Makino, was considerably concerned with providing taxpayers with a more convenient tax law compliance environment (NTA 2007). By offering the "e-Tax" channel choice, the NTA intended to transform the bureaucratic tax public administration into a modern, citizen-centric "service" organization, regain citizen trust, and achieve the policy outcomes – better tax law compliance in the globalized industrial nation of ageing population (NTA 2007). Since "e-Tax" adoption is voluntary and also requires considerable switching costs (e.g. obtaining digital signature for taxpayer authentication and learning new software tools), citizen adoption of "e-Tax" can be viewed as evidence that citizens perceive the "e-Tax" channel choice and online self-service option as superior, with respect to extracting value from the NTA tax services, to the traditional tax services (e.g. paper-based tax filing and face-to-face and phone consultation). Therefore, we argue that the increased level of "e-Tax" adoption can be considered as positive evidence for the NTA performance improvement in achieving better tax laws compliance online through e-Tax. Furthermore, unlike the US, the UK, Ireland, and Australia, the NTA did not provide "e-Tax" users with any other incentives than convenience: neither fast track processing nor quick tax refund (Ministry of Finance, 2007). Hence, the voluntary citizen adoption of the "e-Tax" option is used in this paper to assess the role of e-government in achieving the transformational change in public administration performance. Figure 5 shows a trend in the "e-Tax" adoption data from 2003 to 2007, showing the number of income tax returns filed by "e-Tax" users. "E-Tax" was piloted in Nagoya city in 2004 and rolled out nationwide only three months of piloting. It was operational on the NTA home page since 2004. According to CIO and IT project teams, the initial "e-Tax" software system went through many continuous revisions and changes to reflect the user feedback and suggestions. The use of quality circles encouraged active engagement of the internal IT project teams as well as some power users. In 2006, less than two years since the launch of "e-Tax", the number of tax returns filed through "e-Tax" was 1,057,153. In 2007, after three years since the launch, the number of "e-Tax" filings reached over 1.6 million. This initial stage of rapid diffusion compares favourably against the reported poor take-up of e-tax systems in advanced e-government nations such as the UK (Kablenet 2007). However, the NTA needs to promote take-up of "e-Tax" more effectively given the number of NTA website access has

been steadily increasing, reaching almost 11 million visitors during the tax period (Figure 6) and far exceeds the number of “e-Tax” return filers (Figure 5).

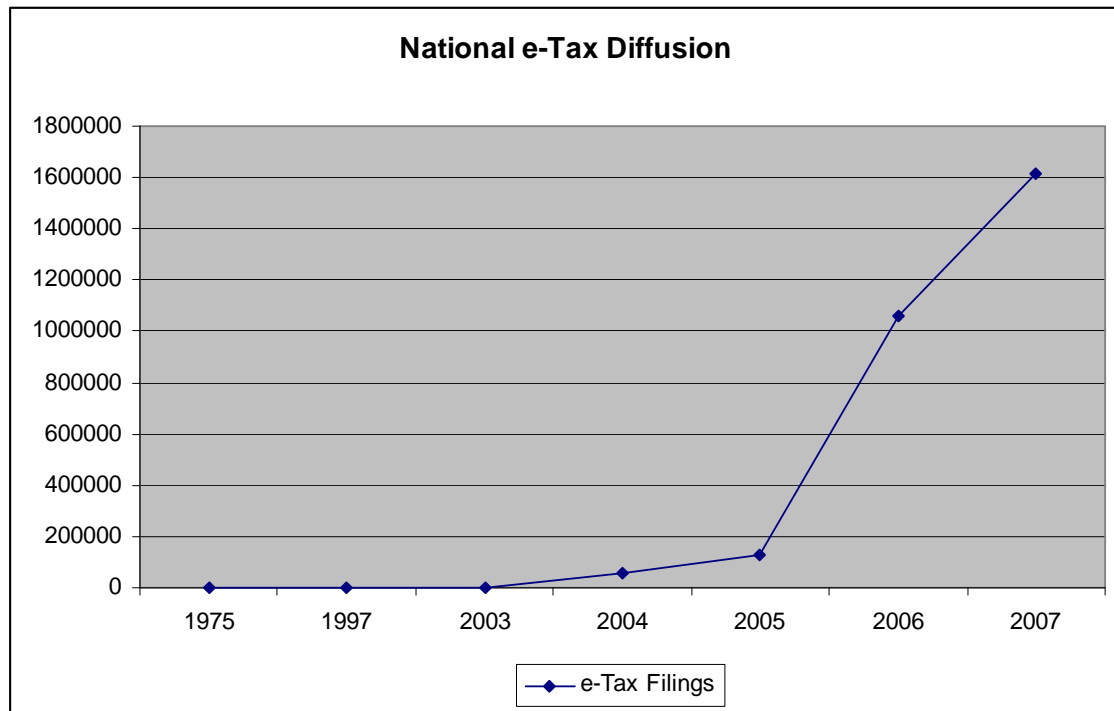


Figure 5: National e-Tax diffusion

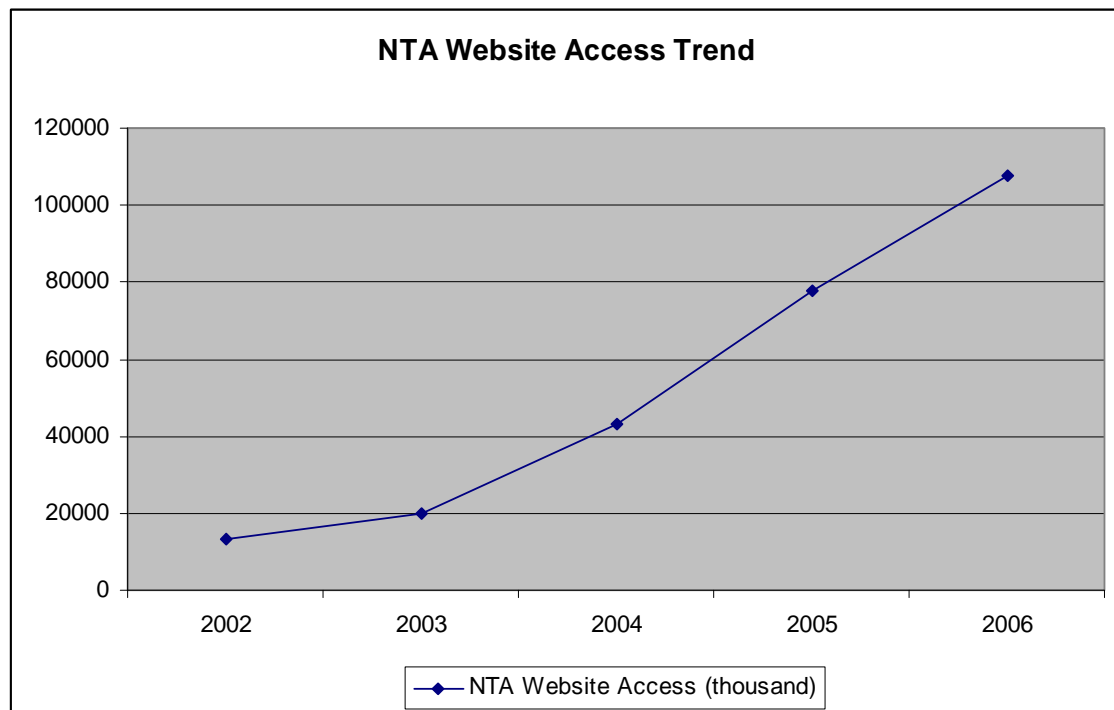


Figure 6: NTA website access trend

Finally, to assess the overall transformational impact of e-government we examine time series of the number of final tax returns filed by individuals. Figure 7 below shows the number of final individual income tax returns and individual income tax plus consumption tax filed by individuals from 1967 to 2006. The longitudinal data do not separate income tax filed using “e-Tax” but instead include all means of tax filing available to the public: “e-Tax” through the NTA website, touch screens installed in local branch offices, telephones, mobile phone devices, and paper forms. The two line graphs in Figure 7 show some overall increases in both individual income tax and consumption tax filings (wide

line) and individual income tax filings (narrow line) from 1967 to 2004. However, after 2004 when e-Tax was first launched through the NTA website, a very sharp increase is observed in the number of final tax returns filed by individuals in 2004. This is true for individual income tax as well as for individual tax plus consumption tax. These sharp increases after 2004 provide evidence that the NTA's e-government initiative through "e-Tax" had transformational impacts on organizational performance and improved taxpayer compliance in filing income tax returns and other tax obligations. In other words, "e-Tax" had a significant impact on the agency's public service reform goal of "creating a favourable national tax administration environment" that makes tax filing and tax payment more convenient to the public.

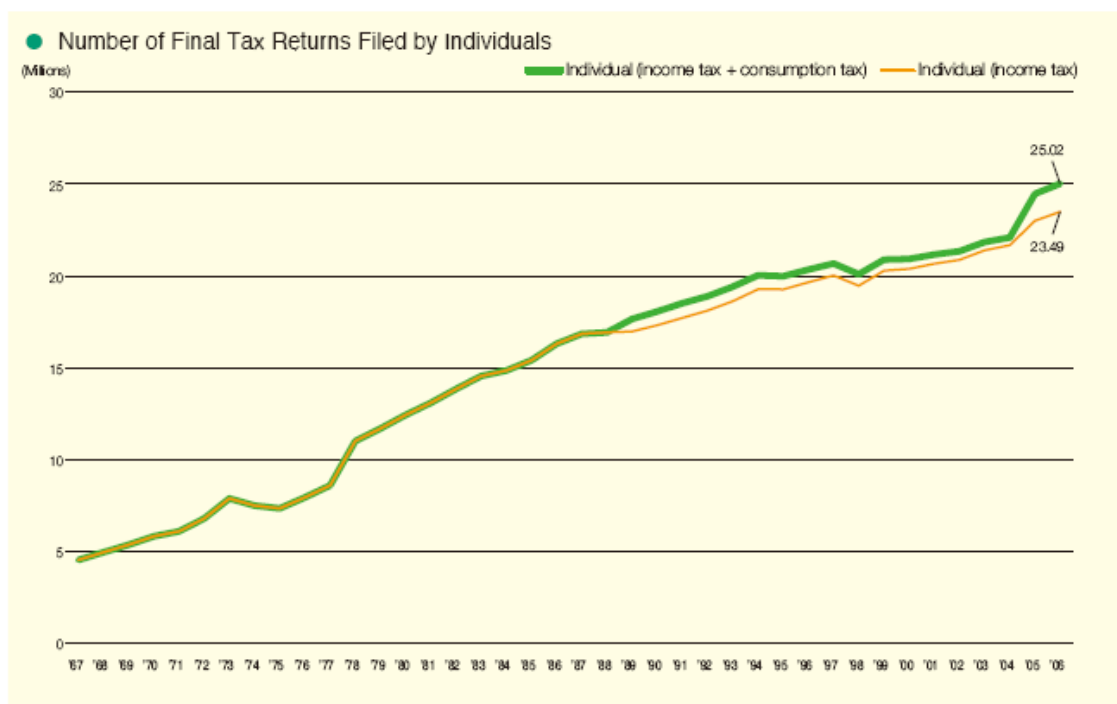


Figure 7: A trend of final tax returns by individuals

6. Discussion and conclusion

This paper examined the transformational impact of e-government by exploring links between public service reform through e-government and actual government performance using the case study of "e-Tax" initiative launched in 2004 by Japan's National Tax Agency. Though cautionary, this study concludes that "e-Tax" had the two major transformational impacts on the government agency performance. The NTA through "e-Tax" reduced tax administration costs internally and reduced tax laws compliance costs by providing the new, convenient, faster, and improved public services. We argue that it is difficult to achieve the observed major improvements in NTA performance without the successful implementation of the integrated, sophisticated "e-Tax" system and the high-level, voluntary citizen adoption of the "e-Tax" system.

In light of the findings of this study, we conclude that due to the relative newness of e-government research field we have paid insufficient attention to two necessary conditions that may explain the mixed findings on the transformational impact of e-government. The two conditions are: the need to focus more on sophisticated e-government and the need to give up our belief in the magical power of e-government.

6.1 Sophisticated e-government

Firstly, sophisticated e-government development is necessary for the transformational impact of e-government to occur. In other words, government will not transform public service quality and responsiveness with the current provision of informational government websites. In discussing the transformational power of e-government, West (2004, p. 24) concludes that "evidence from this research is consistent with incremental rather than transformational change". However, the author

also concludes (p. 24): "Few government Web sites have progressed to the fully integrated and executable online service delivery or interactive democracy stages. ... For government agencies to realize the transformational power of the Internet, officials need to rely on models that emphasize integration, functionality and democracy enhancement." Based on the two local e-government surveys in the U.S., Norris and Moon (2005) report very few transformational impacts of e-government at the local government level. However, they also conclude that "the movement toward integrated and transactional e-government is progressing much more slowly" (p. 64) in comparison to the progress made by local governments so far in providing less sophisticated and largely informational e-government. In this case study, we described the integrated, sophisticated "e-Tax" system which was designed as software tools for transforming the traditional national tax agency facing the challenging operational environment into a provider of citizen-centric tax administration services. The integrated, sophisticated e-government system enabled the transformation of the NTA as a networked information sharing organization linking all the front-line tax consultants and back office staff.

6.2 Giving up our belief in the magical power of e-government

Secondly, sophisticated e-government provision by itself is not sufficient to effect public service reform through the use of e-government. The transformational impact of e-government requires mobilizing internal resources particularly people to implement changes through e-government initiatives. Particularly, transformational change in contrast to incremental change requires effective leadership (Rainey and Thompson 2006). In the case of public service reform through e-government, what matters is top management team's strategic intent to transform public services as well as strategic communication of that intent throughout the government organization. In the corporate strategy literature, strategic intent of a senior executive or top management team conveys a clear sense of new future direction to achieve success (Hamel and Prahalad 1989). What is implied here is that strategic intent is a key antecedent of empowering people who actually implement strategy at the grassroots level in the organization. A long-term, integrated, strategic approach to communicating with key stakeholders is another antecedent of empowering people to successfully implement strategic change in the organization (Argenti et al. 2005). Extant e-government research methodology is often limited to an analysis of government websites. However, government's strategic intent to transform public service and strategic communication of strategic intent need an examination beyond the website and indeed require an in-depth analysis of public policies, official government meeting minutes, and leadership behaviours that may shed light on organizational operations, management, and performance. In this paper we adopted a multi-method approach which is necessary to understand the complexity of the social and political processes (Scholl 2005).

This second observation is consistent with the conclusion made by Lynne Markus and Robert Benjamin (1997). In their seminal paper, "The Magic Bullet Theory in IT-enabled Transformation", they explored the difficult reality of realizing IT-enabled transformation within the organization. In their conclusion they underscored the imperative of giving up our blind trust in the magical power of IT in order to successfully implement transformational change. They also conclude: "The hard reality of IT-enabled transformation is that change is everyone's job (p. 55)."

There are some limitations to this research which assessed the transformational impact of e-government on government performance and its public service reform. In this study, we have not addressed the transformational impact of e-government on taxpayers. For example, public satisfaction with "e-Tax" was not explicitly investigated, although the increasing "e-Tax" take-up from 2004 to 2007 can be considered as evidence of public approval for the NTA's public service reform efforts through e-government. Future research is needed to address this limitation through a survey of "e-Tax" users and non-users.

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